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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,863	05/08/2000	ULRICH BENZLER	10191/1227	5597

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EXAMINER

AN, SHAWN S

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/462,863

Applicant(s)
Ulrich Benzler et al.

Examiner
Shawn An

Art Unit
2613



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 26, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-12 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment/Remarks

1. Applicant's remarks filed on 12/26/02 have been fully considered but they are not persuasive. The Applicants present arguments of which Ziegler's reference neither suggests nor motivates: A) the lacking limitation of "utilizing aliasing reducing interpolation filtering, ... of each pixel."; and B) directly teaches away from using the techniques of a non linear interpolation system.

However, after careful scrutiny of the above reference, the Examiner must respectively disagree, and maintain the grounds of rejection for the reasons that follow.

In response to the argument A), even though Ziegler discloses determining a second motion vector with a sub-pixel accuracy (element 2), wherein a resolution being selected to be higher (refined accuracy) than a resolution of a pixel raster in the first search, Ziegler does not particularly elaborate on determining a second motion vector with a sub-pixel accuracy by an aliasing reducing interpolation filtering, and more than four neighboring pixels being utilized for an interpolation of each pixel as previously discussed in Office action as filed on 9/26/02.

However, Thomas (4,890,160) teaches motion vector detecting method comprising aliasing reducing interpolation filtering, and more than four neighboring pixels being utilized for an interpolation of each pixel in order to reduce visual effects of aliasing (col. 9, lines 25-55).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method for generating an image when estimating a motion of image sequences as taught by ZIEGLER to incorporate the well known concept of aliasing reducing interpolation filtering, and more than four neighboring pixels being utilized for an interpolation of each pixel as taught by Thomas in order to reduce the visual effects of aliasing.

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In response to B) the Examiner understands that the Ziegler reference appears to teach away from using the techniques of a non linear interpolation system. However, one of ordinary skill in the art would recognize that such a teaching, while not the proffered system is no less of a teaching that using such interpolation is well known. In other words Ziegler does teach the use of interpolation, although in his opinion it is not the best mode. Applicant's point that errors may occur in Thomas' system is well taken however it does not negate obviousness under Section 103. The motivation to combine teachings is that Ziegler's system while not preferred the use of interpolation can be modified to use interpolation of neighboring pixels to produce motion vectors of higher accuracy.

Furthermore, the Applicant is reminded that the *35 USC § 103* rejections are based on combinations of references. Moreover, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 6-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over ZIEGLER (Corporate Research & Development) in view of Thomas (4,890,160) as was previously set forth in the last Office action as Paper 8 as filed on 9/26/02.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over ZIEGLER and Thomas as applied to claim 6 above, and further in view of Eifrig et al (5,991,447) as was previously set forth in the last Office action as Paper 8 as filed on 9/26/02.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

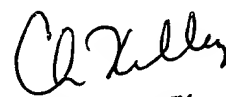
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number is (703) 305-0099.



SSA

March 9, 2003



CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
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